Knowledge Worker

Thinking about Performance Engineering

(May 2014)

There is no better instance of knowledge work than that done by the performance improvement professionals who are members of ISPI; namely, performance engineering. My goal in this column is to lay out what I see as the heart of the value proposition offered by the International Society for Performance Improvement (ISPI); namely, developing, documenting, disseminating, advancing and advocating the know-how used to engineer performance in three related and connected domains: people, processes and organizations. Performance Engineering, as explained here, is a variation of a problem-solving approach known as "Solution Engineering" (Nickols, 2013). Performance Engineering is marked by two phases: Investigation and Intervention (see Figure 1). These are discussed next and we will then examine the two key terms in the title of this column: Performance and Engineering.

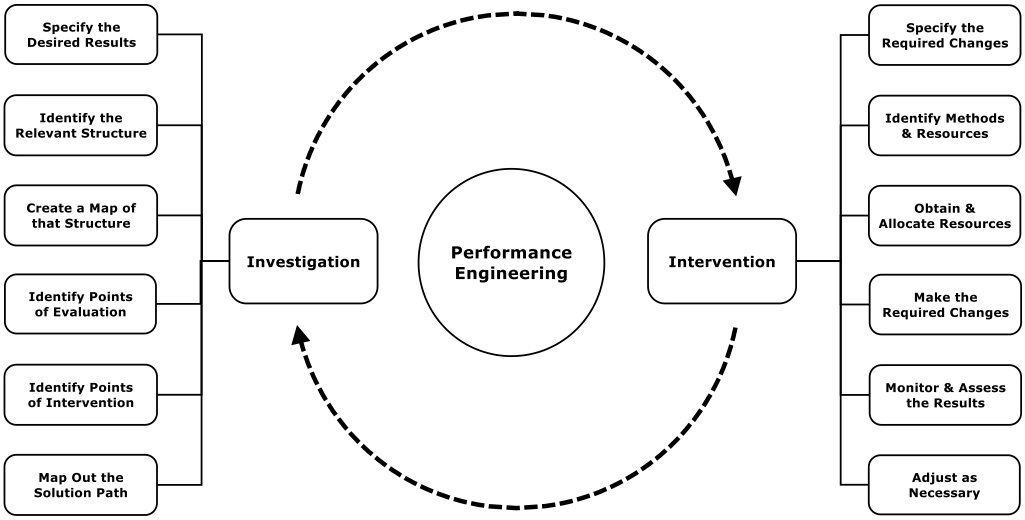

Figure 1 – The Performance Engineering Process

The first phase, Investigation, is triggered by what Dewey (1910) called a felt difficulty, "a state of perplexity, hesitation, doubt" (p.9). This might owe to a sense of unease – that something is wrong but no one knows exactly what or for sure. Or it might owe to the fact that although it is quite clear as to what is wrong, what to do about it is not immediately apparent. Both cases are marked by uncertainty regarding action.

The aim of investigation, then, is to eliminate or reduce uncertainty regarding action – its basis, the result to be achieved and what variables should be changed and how to change them. In effect, this amounts to specifying a solution, a course of action that will lead to the desired results.

Once a course of action has been specified, attention turns to the second phase, Intervention – to doing what has been figured out. To intervene is to change things with some purpose or outcome in mind. Change is typically indirect; you change things over here in order to realize some effect over there. "Over here" is where you change things in direct and immediate ways – the point(s) of intervention. "Over there" is where you will gauge success – the point(s) of evaluation. There is where you will assess the eventual efficacy of any actions taken.

"Over here" is marked by proximal targets, variables that are directly accessible. "Over there" is marked by variables that cannot be directly accessed in space or time. These are the ultimate targets. Between proximal and ultimate variables lie intermediate variables. These constitute the paths through which changes made to proximate variables make themselves felt on ultimate variables. In the words of Newell and Simon (1972) this is the "solution path."

Let's visit now the second of the two terms serving as the focal point for this column: engineering. At its heart is engineer, which can be both noun and verb. We are concerned here with engineer as a verb. To engineer is first of all to do the work of an engineer. But there is a second, more important meaning when it comes to engineering performance. Engineer, as a verb, also means to "to arrange, manage or carry through by skillful, artful contrivance" (Webster's, 1989) as in, "She engineered a successful new product launch." To engineer performance, then, is to bring about desired performance "through skillful, artful contrivance"; namely, through the reasoned, intelligent and systematic application of relevant models, methods, tools and techniques. In short, to engineer performance is to skillfully apply selected, relevant performance technologies.

Now let's visit the first term: performance. I use the term "performance" to refer to actions and their effects, outcomes and the actions that produce them. All organizations are marked by at least three domains of performance. First, of course, is the domain of people. This includes individuals, groups and teams. A second domain is that of processes. Here three basic categories of process are of interest: production, transaction and adaptation. Product processes are transformative, they convert inputs into outputs. Transactional processes are exactly that, concerned with exchanging one thing (e.g., products) for another (e.g., money). Adaptation processes are concerned with achieving and maintain a good fit between the system or organization under study and its larger context or environment. A third domain of performance is that of the organization itself, often measured in financial ways (e.g., profit) but also in operational ways (e.g., share of market) and in terms of its societal impact (see Figure 2).

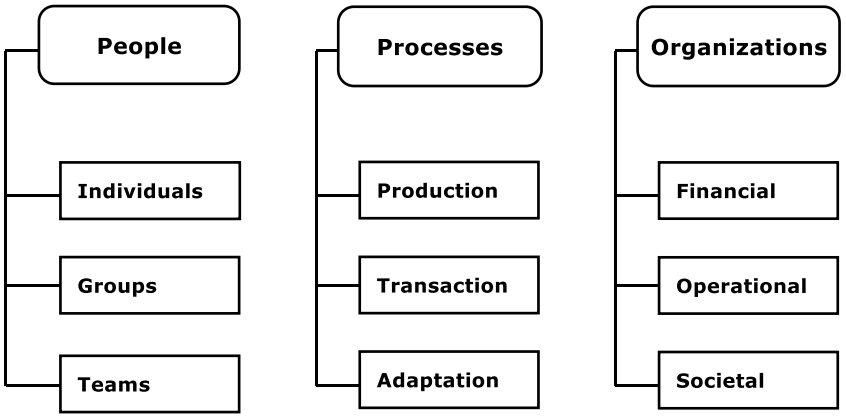

Figure 2 – Performance Domains

Performance can be engineered in all three domains and in all three subsets of each. Doing so is what ISPI is all about. No other organization, not ASTD nor ASQ nor SHRM nor the OD Network nor any other organization of professionals has that aim as its core. And only at ISPI are these three domains dealt with in integrated, evidence-based ways. All those other societies, like the fabled blind men, have their hands on different parts of the elephant. So if you're wondering why you should stay with ISPI or why you should join, my belief is that only at ISPI can you learn how to engineer the performance of people, processes and organizations, singly and in concert. No other organization has or offers that kind of know-how. Those who master it are knowledge workers in every sense of that term.

References

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About the Author

Fred Nickols, CPT, is a knowledge worker, writer, consultant, and former executive who spent 20 years in the U.S. Navy, retiring as a decorated chief petty officer. In the private sector, he worked as a consultant and then held executive positions with two former clients. Currently, Fred is the managing partner of Distance Learning LLC. His website is home to the award-winning *Knowledge Workers' Tool Room* and more than 200 free articles, book chapters, and papers. Fred is a longtime member of ISPI and writes this monthly column for *PerformanceXpress*.